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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,132	02/08/2000	Kiyoshi Iseki	11197/1	2161
7590		02/02/2006	EXAMINER	
John C. Altmiller		SIMONE, CATHERINE A		
Kenyon & Kenyon		ART UNIT		
1500 K Street N.W.		PAPER NUMBER		
Suite 700		1772		
Washington, DC 20005-1257		DATE MAILED: 02/02/2006		

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/500,132

Applicant(s)

ISEKI ET AL.

Examiner

Catherine Simone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misiano et al. (5,462,779).

Misiano et al. discloses a functional roll film comprising a transparent plastic film having gas properties (Fig. 1, #10 or Fig. 2, #20), and having an inorganic oxide layer on at least one surface (Fig. 1, #12 or #11, or Fig. 2, #21) wherein the inorganic oxide layer comprises a composite oxide having at least two components (Fig. 2, #21). However, Misiano et al. fails to disclose the maximum thickness of the inorganic oxide layer being equal to or less than 1.5 times the minimum thickness of the inorganic oxide layer among layer thickness values measured in one roll unit of the plastic film and the one roll unit of the plastic film having a width of at least 400 mm and a length of at least 4,000 m, a width of at least 1,000 mm and a length of at least 15,000 m, and a width of 400 to 1,000 mm and a length of 4,000 to 10,000 m, and the difference between a maximum wt% and a minimum wt% of one component of the composite oxide in the one roll unit of the plastic film being within 20 wt%. Misiano et al. does, however, teach the inorganic oxide layer having a uniform thickness (see col. 2, line 20). Therefore, the optimum range for the thickness of the inorganic oxide layer and the optimum range for the wt% of one

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component of the composite oxide would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results as shown by Misiano et al. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the thickness of the inorganic oxide layer in Misiano et al. to have a maximum thickness equal to or less than 1.5 times the minimum thickness of the inorganic oxide layer and to have modified the wt% of the one component of the composite oxide in Misiano et al. to have the difference between a maximum wt% and a minimum wt% within 20 wt%, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. See MPEP 2144.05 (II).

Furthermore, one of ordinary skill in the art would have recognized the length and width of a packaging film to be sized depending on the object that is being packaged. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have the packaging film of Misiano et al. be sized to having a width of at least 400 mm and a length of at least 4,000 m, a width of at least 1,000 mm and a length of at least 15,000 m, and a width of 400 to 1,000 mm and a length of 4,000 to 10,000 m, since the size would depend on the object being packaged. Additionally, it has been held that claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" were held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art. *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

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3. Claims 1-3, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai et al. (5,378,506).

Imai et al. discloses a functional roll film comprising a transparent plastic film having gas properties (see col. 5, lines 54-61), and having an inorganic oxide layer on at least one surface (see col. 6, lines 36-41) wherein the inorganic oxide layer comprises a composite oxide having at least two components (see col. 6, lines 40-41). However, Imai et al. fails to disclose the maximum thickness of the inorganic oxide layer being equal to or less than 1.5 times the minimum thickness of the inorganic oxide layer among layer thickness values measured in one roll unit of the plastic film and the one roll unit of the plastic film having a width of at least 400 mm and a length of at least 4,000 m, a width of at least 1,000 mm and a length of at least 15,000 m, and a width of 400 to 1,000 mm and a length of 4,000 to 10,000 m, and the difference between a maximum wt% and a minimum wt% of one component of the composite oxide in the one roll unit of the plastic film being within 20 wt%. Imai et al. does, however, teach the inorganic oxide layer having a uniform thickness (see col. 8, lines 12-14). Therefore, the optimum range for the thickness of the inorganic oxide layer and the optimum range for the wt% of one component of the composite oxide would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results as shown by Imai et al. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the thickness of the inorganic oxide layer in Imai et al. to have a maximum thickness equal to or less than 1.5 times the minimum thickness of the inorganic oxide layer and to have modified the wt% of the one component of the composite oxide in Imai et al. to have the difference between a maximum wt% and a minimum

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wt% within 20 wt%, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. See MPEP 2144.05 (II).

Furthermore, one of ordinary skill in the art would have recognized the length and width of a packaging film to be sized depending on the object that is being packaged. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have the packaging film of Imai et al. be sized to having a width of at least 400 mm and a length of at least 4,000 m, a width of at least 1,000 mm and a length of at least 15,000 m, and a width of 400 to 1,000 mm and a length of 4,000 to 10,000 m, since the size of the film would depend on the object being packaged. Additionally, it has been held that claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" were held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art. *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

4. Claims 1-3, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (JP 06-330318; refer to computer translation).

Matsuda et al. discloses a functional roll film comprising a transparent plastic film (Drawing 2, #4) having gas properties, and having an inorganic oxide layer on at least one surface (Drawing 2, #16) wherein the inorganic oxide layer comprises a composite oxide having at least two components (see page 5, paragraph 0033, lines 1-5). However, Matsuda et al. fails to disclose the maximum thickness of the inorganic oxide layer being equal to or less than 1.5 times the minimum thickness of the inorganic oxide layer among layer thickness values measured in

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one roll unit of the plastic film and the one roll unit of the plastic film having a width of at least 400 mm and a length of at least 4,000 m, a width of at least 1,000 mm and a length of at least 15,000 m, and a width of 400 to 1,000 mm and a length of 4,000 to 10,000 m, and the difference between a maximum wt% and a minimum wt% of one component of the composite oxide in the one roll unit of the plastic film being within 20 wt%. Matsuda et al. does, however, teach the inorganic oxide layer having a uniform thickness (see page 4, lines 1-5). Therefore, the optimum range for the thickness of the inorganic oxide layer and the optimum range for the wt% of one component of the composite oxide would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results as shown by Matsuda et al. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the thickness of the inorganic oxide layer in Matsuda et al. to have a maximum thickness equal to or less than 1.5 times the minimum thickness of the inorganic oxide layer and to have modified the wt% of the one component of the composite oxide in Matsuda et al. to have the difference between a maximum wt% and a minimum wt% within 20 wt%, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. See MPEP 2144.05 (II).

Furthermore, one of ordinary skill in the art would have recognized the length and width of a packaging film to be sized depending on the object that is being packaged. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have the packaging film of Matsuda et al. be sized to having a width of at least 400 mm and a length of at least 4,000 m, a width of at least 1,000 mm and a length of at least 15,000

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m, and a width of 400 to 1,000 mm and a length of 4,000 to 10,000 m, since the size of the film would depend on the object being packaged. Additionally, it has been held that claims directed to a lumber package “of appreciable size and weight requiring handling by a lift truck” were held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art. *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

### ***Response to Arguments***

5. Applicant's arguments filed 10/31/05 have been fully considered but they are not persuasive.

Applicants state “Applicants discovered that, in a roll to roll method, where material is vapor deposited on a roll film while the film is being unrolled, monitoring the film layer thickness in both MD and TD is needed in order to control the thickness of the vapor deposited layer of the film”. Applicants then argue, “Misiano discloses a film with an  $\text{Al}_2\text{O}_3$ - $\text{SiO}_2$  layer, in which the thickness of the layer is not controlled at all. Similarly, Imai discloses a film with a MgO layer, in which the layer thickness is not controlled at all. Matsuda discloses a film with a  $\text{SiO}_x$  layer, in which the thickness of the layer is monitored in the MD using a fluorescent x-ray monitor. However, there is no mention of monitoring the thickness of the layer in the TD...therefore, since a method that uses some control can not reach the claimed ratio, the films of Misiano and Imai, which use no control, and the film of Matsuda, which uses control in only one direction, are also highly unlikely to reach the claimed ratio”.

However, it is to be pointed out that the method of forming the product is not germane to the issue of patentability of the product itself. MPEP 2113. As shown in the rejections above, Misiano, Imai and Matsuda each clearly teach a transparent plastic film having gas barrier properties and having an inorganic oxide layer on at least one surface as recited in claim 1. In addition, Misiano, Imai and Matsuda each teach the inorganic oxide layer having a uniform thickness (see in rejections above). Therefore, the optimum range for the thickness of the inorganic oxide layer would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the thickness of the inorganic oxide layer in each of Imai, Misiano and Matsuda to have the maximum thickness of the inorganic oxide layer equal to or less than 1.5 times the minimum thickness of the inorganic oxide layer, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. See MPEP 2144.05 (II). One skilled in the art would clearly be able to modify the thickness of the inorganic oxide layer in each of Misiano, Imai and Matsuda to have the maximum thickness equal to or less than 1.5 times the minimum thickness in order to provide excellent gas barrier properties and excellent transparency, if so desired.

Applicants further argue "that a Matsuda film is unlikely to have a layer thickness ratio of 1.5 along the width and length of the film, as in the claimed film of the present invention.... a high level of uniformity of film layer thickness over a great width and a great length of the film can not be achieved in a film produced according to a method of Matsuda. Monitoring the film

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thickness in the MD alone cannot make the film layer thickness uniform because uniformity along the MD does not necessarily ensure uniformity along the TD, which is not monitored in Matsuda”.

Again, it is to be pointed out that the method of forming the product is not germane to the issue of patentability of the product itself. MPEP 2113. Additionally, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “a layer thickness ratio of 1.5 *along the width and length of the film*” and “uniformity of film layer thickness over a great width and a great length of the film”) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, as pointed out above, Matsuda clearly teaches an inorganic oxide layer having a uniform thickness (see page 4, lines 1-5) and it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the thickness of the inorganic oxide layer in Matsuda to have the maximum thickness equal to or less than 1.5 times the minimum thickness, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. See MPEP 2144.05 (II). One skilled in the art would clearly be able to modify the thickness of the inorganic oxide layer in Matsuda to have the maximum thickness equal to or less than 1.5 times the minimum thickness in order to provide excellent gas barrier properties and excellent transparency, if so desired.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.

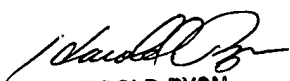
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Catherine A. Simone  
Examiner  
Art Unit 1772  
January 27, 2006



HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

1/30/06